INDEX TO SURGICAL PROGRESS.

HEAD AND NECK.

I. An Improved Method of Treating Congenital Fistulæ of the Neck. By PROFESSOR FRITZ KÖNIG (Altona). Congenital fistulæ in the neck arising from faulty closure of the second branchial cleft are infinitely more common than those originating from the first and third clefts. When complete, they usually form a canal running from Rosenmuller's fossa (behind the tonsil) under the digastric muscle through the cervical fascia and platysma to open through the skin between the sternomastoid muscles. Recurrence after operation is common, because excision of the pharyngeal end of the fistula is very difficult. In the case of a child, von Hacker excised the outer half of the fistula, passed an eyed probe through the pharyngeal half, and by this means drew a thread previously fixed to the outer end of this portion of the fistula into the pharynx and out of the mouth. By traction on the thread it was easy to pull the remnant of the fistula "outside in" into the mouth, exactly as one everts the finger of a glove in pulling it off the hand. The fistula was thus excised easily. When inflammation has made the fistula adherent to the surrounding tissues, such a procedure becomes impossible, and in most cases this condition is present. Fritz König has devised the following operation, which he finds successful.

By dissection, mobilize the fistula to a point above the digastric; above this free it by blunt dissection with the finger to a point close to the oral mucous membrane. Open the mouth with a Whitehead speculum. Pass a strong curved probe through the wound into the mouth at a point anterior and inferior, but close to, the tonsil. In doing this, it will be necessary to incise the oral mucosa. Tie a silk thread to the outer end of the fistula, and with the probe pull the thread into the mouth. Traction on the thread will pull the mobilized fistula into the mouth. Suture the side of the fistula to the edges of the wound in oral mucosa and cut away the protruding portion of the fistula. Close the external wound *secundem artem.* The result of the operation is that all communication between the fistula and the skin is cut off, while the remnants of the fistula remain as a harmless passage opening both behind and in front of the tonsil. The operation avoids the difficulty of excising the pharyngeal end of the fistula, and the results are excellent. König has applied the same principle in excising certain blind internal rectal fistulæ, and has found it beneficial.—*Archiv für klinische Chirurgie,* Band lxx, p. 1008.

John F. Binnie (Kansas City).

ABDOMEN.

I. The Operative Technique of Prolapsed Invaginated Intestine. By Professor Dr. F. Hofmeister (Tübingen). It is not rare in a case of intussusception to feel the invaginated mass in the rectum, and it occasionally happens that the mass protrudes through the anus. Leichtenstern has collected 222 cases of intussusception, with forty-one cases of prolapse and thirty-one cases of the tumor mass being palpable per rectum. Braun has tabulated sixty-five cases, with nine cases of prolapse, and twenty-two cases where the mass could be felt per rectum. Rydygier, however, in eighty-six observations reports only two cases of prolapse and four of the tumor in the rectum.

Most cases occur in small children, with acute invagination. The time from the onset of the disease until the appearance of the prolapse varies from two days to one month. In adults it occurs mostly in chronic cases, and the prolapse is not seen for a number of weeks.

The author reports two cases.

Case I.—Patient aged thirty-two years. Male. Prolapse on tenth day of disease. Prolapsed mass twenty-five centimetres in length. At the apex of the mass the ileocæcal orifice was seen.

Median abdominal section having been made, the intussusceptum was pulled out as far as possible, and the gut divided between two intestinal clamps at a point just above the intussuscipiens. Proximal stump closed with purse-string suture.

The mesentery of the intussusceptum was sectionally ligated and divided. Thereupon the intussusceptum disappeared within the intussuscipiens, leaving the mesentery of the middle cylinder easy of access.

Ligature and division of this mesentery.

Purse-string suture passing through all the layers at the entrance of the intussuscipiens. Circular incision through the wall of the intestine proximal to the suture. End of stump closed by pulling up of suture.

Lateral anastomosis of the two stumps, so arranged that the waves of peristalsis passed in the same direction. Intussusceptum removed per rectum. Length of resected gut was 130 to 140 centimetres. Patient made a good recovery.

Case II.—Case of long standing. Patient aged forty-two years. Prolapsed invaginatio sigmoideo-rectalis. On apex of prolapsus a carcinomatous growth.

Operation (Professor Küttner). Seat of invagination too low down to be reached by abdominal section. Perineum and rectovaginal septum dissected up four centimetres. Mass pulled down so that highest point of intussuscipiens could be reached. The anterior half of the circumference of the intussuscipiens was cut through at this point, *i.e.*, mucosa; then muscularis, and, finally, the serosa, thus opening the peritoneal cavity. The serous surface of the free edge of the intussuscipiens was immediately sutured to the serosa of the intestinal wall just above the intussusceptum, thus closing the peritoneal cavity again. Then the anterior half of the circumference of the intussusceptum was cut through, and the muscularis and mucosa of the intussuscipiens were joined by layer suture to the free edge above. Then followed division of the posterior half of the circumference and sectional ligature and division of the mesosigma. Serous surfaces of the divided portions sutured as anteriorly, removal of intussusceptum, and suture of muscularis and mucosa.

There remained an invagination of about three centimetres in length, at the apex of which was seen the circular line of sutures. This invagination could be easily reduced. The vaginal mucous membrane, rectovaginal septum, etc., were repaired.

Patient recovered. Died one month later from other causes. Field of operation entirely healed. No stenosis.

In discussing the method of intestinal resection in cases of invagination, the author believes that in many cases it is better to simply resect the invagination, and not resect the sheath as well, the mass being removed " per vias naturales." This is simple in cases of prolapse. It is argued that if an ileocæcal segment a foot long can prolapse through the rectum in a few days, despite the restraining mesentery, and, as was seen in Case I, the freed invaginatum sinks rapidly into the rectum, then with an open abdomen, in the majority of cases, it will be easy to push the intussusceptum into the colon, and so on out. There is less danger of infection than in opening the intussuscipiens.

The method recommended by Bier, *i.e.*, making a longitudinal opening in the intussuscipiens near the neck and tying off *en masse* the intussusceptum, and then dividing it below the ligature, and using the opening for lateral anastomosis, is held to be unsafe on account of the possibility of the ligature slipping and retraction of the stump. Of great advantage, however, would be a modification of this.

(1) The operator begins by division of the gut, pulled out as far as possible, and sewing up of the proximal stump.

(2) The distal stump is allowed to drop down deep into the sheath of the invagination, and the open end of the sheath is closed with purse-string suture.

(3) Longitudinal opening in the sheath a few centimetres below its neck, ligature and division of its inner cylinder as high up as possible, and lateral anastomosis of sheath with proximal stump.

This gives a much more secure ligature than by the method of Bier. It differs from the first described method only in that the stump of the mesentery belonging to the inner cylinder is fixed in the blind end of the stump.

This plan of operation is simply the application of the Frey method of intestinal resection to the condition of invagination.—*Beiträge zur klinischen Chirurgie,* Band xxxix, Heft 1.

PAUL MONROE PILCHER (New York).

II. (a) Modified Maydl's Method of Operating for Relief of Congenital Exstrophy of the Bladder. (b) Cholecystenterostomy combined with Entero-anastomosis. The two operations noted may be considered together, as they are based on precisely the same idea.

Maydl's operation in ectopic bladder consists in implanting the ureters and the adjacent portion of bladder-wall into the gut. The great danger of this procedure consists in the ascent of infection to the kidneys, and consequent nephritis and death.

(*a*) BORELIUS (Lund, Sweden), to avoid this accident, implants the base of the bladder with the ureters into the apex of the Ω of the sigmoid flexure, and makes an anastomosis between the afferent and efferent segments of the sigmoid. The result is that the intestinal contents do not pass through that part of the sigmoid into which the urine pours, and hence the dangers of infection are at least greatly lessened.

[Granting the correctness of Borelius's idea, would it not be wise to throw around the afferent segment, distal to the anastomosis, a constricting ligature of wire, as Fowler has suggested in gastro-enterostomy, or a purse-string suture, and so absolutely insure against fæcal contamination? J. F. B.]—*Centralblatt für Chirurgie,* 1903, p. 780.

(*b*) MARAGLIANO reports that the same principle is used by Professor Fedor Krause to prevent the ascent of infection to the gall-bladder in cases of cholecystenterostomy. An anastomosis is effected between the loops of gut leading to and from the gall-bladder. [In this case, also, occlusion of the afferent loop might be a valuable precaution.—J. F. B.]—*Centralblatt für Chirurgie,* 1903, p. 941.

III. Turning up the Arch of the Ribs for Facilitating Operative Procedures in the Hypochondriac and Epigastric Regions. By PROFESSOR GEORGE MARWEDEL (Aachen). The rigidity of the lower margin of the thorax interferes much with access to the upper surface of the liver, the dome of the diaphragm, and the lower end of the œsophagus. Marwedel has devised a method of overcoming this difficulty, has used it frequently on the cadaver, and found it successful on the living. In operating on the upper surface of the liver the abdomen is opened by a curved incision parallel to the rib border, and stretching from the ensiform cartilage to the tenth rib. If in the upper edge of the wound one separates the rectus and external oblique muscles from the internal oblique and transversalis, one exposes the costal margin. It is easy to expose in this split (between the muscles) the cartilage of the seventh rib and to divide it near its sternal end. By blunt dissection downward and outward it is easy to expose the junction of the bone and cartilage of the ninth, eighth, and seventh ribs, and to divide them there. Having done this, the loosened portions of ribs and the soft parts over them are easily retracted upward over the thorax, and free access to the hypochondrium is obtained. On the left side a similar procedure gives free access to the upper part of the stomach and cardia.—*Centralblatt für Chirurgie,* 1903, p. 939.

JOHN F. BINNIE (Kansas City).

EXTREMITIES.

I. Dupuytren's Contracture. By G. DOBERAUER (Prag). The use of infiltration anæsthesia (Schleich) for this operation is dangerous, since it disposes to gangrene of the skin. The use of Esmarch's bandage is of great service; yet it should be removed before the close of the operation and each vessel ligated, since hæmatomata may also cause gangrene of the skin by their pressure, and for like reasons tight bandages are to be avoided. Inasmuch as gangrene of the wound edges would be followed by ulceration and keloid formation just over the tendons, Lotheisen advocates placing the incision along the ulnar margin extending over to the thenar eminence; a flap is dissected up and the fibres of the palmar fascia removed. The author believes this method limited to cases where the skin is not involved. Where longitudinal palmar incisions are called for, and they lie close together, thus disposing to gangrene, they should be made at separate sittings.

Recently, Lexer has even gone so far as to extirpate the entire skin overlying the contracture, replacing it by pedunculated flaps obtained from the abdomen or by Krause's skin flaps. Kocher's method, though, is regarded as the best procedure.—*Beiträge zur klinischen Chirurgie,* Band xxxiv, Heft 1.

II. Varicose Veins of the Leg. By DR. FELIX FRÄNKEL (Nürnberg). The treatment of varicose veins of the leg is thus summarized. In most of the instances, patients afflicted with varicose veins are in need of no other therapy than the use of a compressing bandage.

In contrast to this class of cases is that class demanding some operative procedure, the indications for which are œdema, severe pains, hæmorrhages, ulcerations, and persistent eczemas. The most expedient and radical procedure, in the author's judgment, is extirpation of the dilated vein in its greater extent, together with resection of a certain extent of the internal saphenous vein just below the saphenous opening. Prior to performing this extirpation, the veins are made more conspicuous by applying a rubber constrictor, moderately tight, to the thigh. In order to obviate the possibility of gangrene of the skin, the veins are not dissected out sharply from the skin, but are torn out bluntly. All bleeding points are secured and ligated with fine 00 silk ligatures. The long skin incisions are adapted with the metal clamps of Michel. The limb is placed on a posterior splint, and the foot of the bed is elevated two feet, according to the suggestion of Lennander, to favor the circulation and prevent thrombosis of the veins above the point of ligature.

Thirty cases were thus operated, and required, on an average, a stay of six weeks in the hospital, and in only three cases, after extirpation of three years, was the end-result unsuccessful.

Only if the condition and age of the patient militate against a narcosis is this extirpation of the veins contraindicated, and the operation of choice then is the Trendelenburg ligation of the saphenous vein close to its entrance into the femoral, and resection of this vein for four inches in the peripheral direction.—*Beiträge zur klinischen Chirurgie,* Band xxxvi, Heft 3.

III. Transplantation of Skin Flaps, Krause's Method. By H. WIDMAN (Nürnberg). Thiersch's skin grafts, even under the most favorable conditions, leave a cicatrix that becomes white, and the resultant scar, being merely covered with regenerated epithelium, has none of the very desirable features of a normal skin. In areas where cosmetic effect is sought, and where pliability of the skin overlying the joints is a desideratum, nothing but normal skin will suffice. This can be effected by the method of transplanting areas of skin.

The requirements for this are, above all, an exquisite asepsis and thoroughly dry condition of the site upon which the graft is to be transplanted. The usual procedures for cleansing having been proceeded with, the hands of the operator, as well as the skin of the patient, are first rubbed with sterilized saline solution and then rubbed perfectly dry. The instruments should also be kept dry. The skin should be chosen from such parts as are free from hair; the flaps are outlined in an elliptical shape, and should comprise, besides the skin, a minimum of subcutaneous cellular tissue sufficient to permit of suturing the flap to the edges of the defect. After the flap is separated it should be placed on a sterilized compress to rid it of blood. The defect is to be covered by one or more elliptical flaps, and the flaps should be larger than the defect, since they tend to shrivel. For covering fingers, they need merely overlap the defect.

The dressing is of dry aseptic gauze and remains *in situ* five days. After this a boric acid ointment may be used. The flap, which at this time may have a livid color, acquires a rosy hue within a week. Six to eight weeks cover the entire time of healing.

Histological studies of such successfully transplanted areas have shown that all the elements present in the normal skin in its entire extent are preserved.—*Beiträge zur klinischen Chirurgie,* Band xxxvi, Heft 3.

IV. A New Massage Procedure. By Dr. F. Hofmeister (Tübingen). As a substitute for the massage and passive motions manually conducted, Hofmeister ingeniously effects a massage of the soft parts of the hand and wrist-joint by rhythmically plunging the hand into a bath of mercury. The mercury is contained in an iron cylinder twenty inches in height; such a vessel will accommodate two and one-half to three liters (eighty pounds) of mercury. The hand is plunged into this bath of mercury from a height of twelve to fifteen centimetres, and the bottom of the vessel is to be reached.

The mercury is covered with a thin layer of alcohol, which serves the purpose of removing dirt from the skin of the hand,

and at the same time prevents evaporation of the mercurial vapors and scattering of particles of mercury. The sittings occupy from one-quarter to one hour, and are never associated with any unpleasant after effects.

The action of the column of mercury is as follows: All parts at the same level are subjected to like pressure; the most distal parts of the hand are under the greatest pressure. Upon immersion, the venous blood and lymph are forced to move in a centripetal direction; upon withdrawal, a rush of arterial blood follows. It will be noted that this ideal massage is devoid of the least pain, so apt to be a part of manual massage; thereby a great gain for the patient has been attained. While it cannot supplant the more forcible massage procedures, it does as much, if not more than the lighter massage, for the stiffening after cellulitis of the fingers and hands. It is also of service in joint affections of the hand and wrist.—*Beiträge zur klinischen Chirurgie,* Band xxxvi, Heft 2.

MARTIN W. WARE (New York).

TO CONTRIBUTORS AND SUBSCRIBERS.

All Contributions for Publication, Books for Review, and Exchanges should be sent to the Editorial Office, 386 Grand Ave., Brooklyn, N. Y.

Remittance for Subscriptions and Advertising and all business communications should be addressed to the

ANNALS OF SURGERY,
227-231 South Sixth Street, Philadelphia.